

# UBC REPORTS

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Gavin Wilson photo

## Drum Song

Vietnamese folk musician Ngoc Bich plays a trung, a traditional Vietnamese drum, during a recent performance at the Institute of Asian Research. Ngoc and fellow musician Khac Chi teach a course at UBC on the performance of Vietnamese music which is sponsored by the School of Music and the Centre for Southeast Asia Research (CSEAR). Both Khac and Ngoc are virtuosos on a variety of folk instruments. They studied and taught in Vietnam and have performed around the world. They were joined in this performance by CSEAR staff member Julie Trang Nguyen and UBC student Tokunoh Yuko.

## Study:

# Demand for university grads not being met

British Columbia is providing enough vocational and technical training, but not enough university education.

That's the conclusion of a recent study by Economics Prof. Robert Allen on the demand and supply of post-secondary education and training in B.C.

"There's a strongly held view that we should continue to emphasize vocational and technical training," says Allen. "My findings show this approach to be misguided."

The study reveals that between 1992 and 1996, the provincial economy required about 35,000 university gradu-

ates annually, but B.C.'s universities only produced 12,000. This means that two-thirds of high quality, well-paying jobs went begging and were filled by people moving to B.C. from other provinces, Allen says.

At the same time, the demand for another 35,000 people with trade, technical, and vocational credentials was met by provincial supply.

"We don't need to expand technical and vocational training any further," says Allen, "but the university system is far too small."

See **DEMAND** Page 2

# Community input sought for UBC vision

by Gavin Wilson

Staff writer

UBC is asking the community to assist it in developing a new vision for the 21st century.

As part of visioning consultation, which seeks to redefine the nature of the university's research and learning environment, President Martha Piper has formed a 33-member Community Advisory Council. Representatives from business, labour, community and cultural groups and provincial and municipal levels of government will provide input as UBC develops a new vision.

Piper also recently visited Victoria, Prince George, Kelowna and Kamloops to consult with the community about the direction the university should take in the coming century.

During her visits Piper met with government representatives, the presidents of post-secondary institutions, business leaders, UBC alumni and high school students.

Students, faculty and staff at the university are already involved in the visioning process.

"We have a responsibility to plan for the future — to be bold, to be visionary — and in this planning process we must be willing to reach out to the community we serve to invite advice and guidance from all quarters," Piper says. "UBC has much to offer the communities it serves, and as British Columbia's pre-eminent research university, it is uniquely positioned to meet the needs of our society."

UBC is redefining its mission in light of societal changes such as increasing globalization, the rapid expansion of information technology and the growing integration of academic fields of study.

As well, the university is seeking to re-examine the purpose of undergraduate education. It is especially looking for ways to combine its research activities with undergraduate education.

Other issues being examined include new models of research partnerships. See **VISION** Page 2

# Mathematician wins nat'l research award

Mathematics Prof. Michael Ward has been awarded one of Canada's top research awards, a 1998 E.W.R. Steacie Memorial Fellowship.

"Dr. Ward is leading an international renaissance in applied mathematics, a field that is growing in importance because it provides hard numerical answers for difficult problems in science, engineering and industry," said Thomas Brzustowski, president of the Natural Sciences and Engineering Research Council of Canada (NSERC), on announcing the fellowship recently.

Applied mathematics in the context of Ward's research involves using math-

ematics to explore gradual changes in the physical properties of materials such as metal alloys.

Ward has explored his field in depth, analysing and developing new models that are being used in areas such as materials science, biology, combustion, fluid mechanics and predicting the performance of semiconductor devices.

"His ability to see the mathematical structure of real world problems, to conceive solutions and to inspire others by his approach, is truly remarkable," Brzustowski said.

Ward made his mark internationally See **AWARD** Page 2



Ward

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"enquiries into  
the odd and  
the ordinary"

WILLIAM NEW  
UBC Dept. of English; Royal Society of Canada

**Think  
About It.**  
UBC RESEARCH

## Vision

Continued from Page 1

new teaching methods, the expansion of continuing education and the changing nature of the student body.

The campus and external consultations will result in a short "green paper," which should be completed in March. This will serve as the basis of further discussion of the issues the university must address in its long-term pursuit of excellence in teaching and research.

The campus and community consultations will culminate in the creation of a vision statement for UBC which will go to the university Senate and Board of Governors for approval in September and October.

Additional information about UBC's vision process can be found on the Web at [www.vision.ubc.ca](http://www.vision.ubc.ca).

## Demand

Continued from Page 1

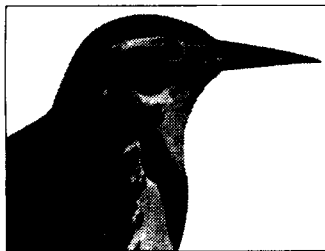
According to the study, B.C. is last among Canadian provinces in the number of degrees awarded per resident aged 20-29, and has the smallest university system, relative to its population, of any province.

While running a small university system may save the B.C. government money, Allen cautions it reduces earnings prospects for children.

The real losers, he says, are children growing up outside of the major urban areas where most universities are located, since travel discourages attendance. And the days of people in smaller communities having access to good jobs in the resource industries are over, he adds.

"The labour market now is very uncertain. People move and change jobs a lot, so they really need general skills, and they need to be lifelong learners. A university education is well-suited to give people those skills."

## MISSING



Many of Canada's migratory birds are disappearing. To help save them, call 1-800-26-PANDA and ask about adopting a kilometre of migratory bird flyway.



Their future is our future.

September 1998

### Kindergarten/Child Care & Preschool Open House

Wednesday, March 4, 1998  
5:30-7:00 p.m.

Contact: 822-5343  
UBC Child Care Services  
2881 Acadia Road, Van.

## Award

Continued from Page 1

in classical applied mathematics and particularly asymptotic analysis — which allows analysis of very complex models in simpler terms by making rational and systematic approximations to the equations that model a phenomenon. These models for analysis may represent, for example, the high speed flow of air past airplane wings, or the flow of a very viscous fluid.

He has also made major theoretical advances in the theory of metastability. Metastable processes influence outcomes in many physical systems, but occur very slowly, taking so long to develop that they are impossible to track numerically. Ward cites changes in the atomic composition of metal alloys over 20 to 40 years as an example.

Ward's methods for analysing these processes have evolved into a new mathematical technique in wide use.

With his Steacie Fellowship, he plans to investigate other classes of very practical diffusion problems including changes in chemical reactions that occur around a defect on a reacting surface, the formation of hot spots in heated ceramics, and the diffusion of oxygen through small capillaries to muscle cells.

While different phenomena, for Ward they all share a com-

mon mathematical thread: they are not in a true steady-state but instead change very slowly in time.

"It is usually very difficult to distinguish strictly stationary solutions from those that are only quasi-stationary," Ward says. "This distinction is, however, very important over very long time intervals, as the ultimate state of the system may be radically different."

The NSERC fellowship is one of four awarded each year. The honour is given to university researchers who are capable of capturing international attention for outstanding scientific or engineering achievement.

Under the terms of the fellowship, NSERC will provide UBC with the full amount of Ward's salary for up to two years. The fellowship will allow him to pursue his research full-time, as well as to obtain new research funding from NSERC.

The E.W.R. Steacie Fellowships will be presented by Gov. Gen. Romeo LeBlanc in Ottawa April 27.

The three other 1998 Steacie fellows are Sara Iverson, Biology, Dalhousie University; Jonathan Schaeffer, Computing Science, University of Alberta; and Louis Taillefer, Physics, McGill University.



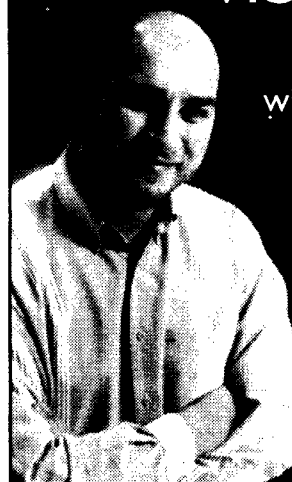
THE UNIVERSITY OF BRITISH COLUMBIA

## Forum for the campus community

on a  
**University Gathering Place**

**Thursday, Feb. 26, 1998**  
12:30-2:30pm, former Faculty Club Building

## vibrations wreak havoc with shuttle experiments



**Tim Salcudean**, Electrical and Computer Engineering; Forest Resources Management



Experiments on space shuttles help solve problems in areas from medicine to material composition. Vibrations on board wreak havoc with experiments. Tim Salcudean and astronaut (and UBC grad) Bjarni Tryggvason have developed the Microgravity Isolation Mount which solves this problem. The MIM has been used on a NASA shuttle flight as well as on the Russian space station, Mir.

# Think About Space

**Think About It.**  
UBC RESEARCH  
[www.research.ubc.ca](http://www.research.ubc.ca)

Colour Connected Against Racism presents

## Cry Freedom: Allying Ourselves

Friday, March 6, 1998  
Student Union Building

Room 214/216 and Conversation Pit

9:00 am

Opening Remarks and Displays

9:30 am

Panel A: **First Nations and Settlers**

12:00 noon

**Presentation and performance** by Women of Colours in Action and Colour Connected Against Racism Displays

1:45 pm

**Film presentation and discussion** by Allan Dutton

4:00 pm

Panel B: **Representation on Campus**

5:45 pm

Closing remarks

**For more information call: Rupinder or Mwalu (822-1421)**

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## Edwin Jackson

224 3540

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# Trade, computer experts take top research prizes

James Brander, a professor in the Faculty of Commerce and Business Administration, and Computer Science Assoc. Prof. Jack Snoeyink have been awarded UBC's top research prizes for 1997.

Brander, whose recent research has focused on the role of international trade policy as it affects natural resources, has won the Prof. Jacob Biely Faculty Research Prize.



**Brander**

His research has also explored entrepreneurship, business entry and venture capital. A past recipient of the UBC Killam Prize and the Faculty of Commerce and Business Administration Research Prize, Brander and faculty colleague Prof. Barbara Spencer are regarded as pioneers in the research area of strategic trade policy.

Brander is managing editor of the *Canadian Journal of Economics* and a research associate of the U.S.-based National Bureau of Economic Research.

Long regarded as UBC's premier award, the Biely prize is given for a distinguished record of recently accomplished published research.

The Charles A. McDowell Award for Excellence in Research, won by Snoeyink, is presented for demonstrated excellence in pure or applied scientific research.

Snoeyink's primary research area is computational geometry, which involves the study of the design and analysis of algorithms for geometric computation.

Computational geometry is a branch of the theory of computer science that seeks efficient algorithms (computer programs) for problems best stated in geometric form.

It finds application in problems from solid modelling, computer graphics, data structuring, and robotics as well as mathematical questions of combinatorial geometry and topology — the study of geometrical properties and spatial relations unaffected by the continuous change of shape or size of figures.

The most visible result of Snoeyink's research — an aluminum sculpture made

from 30, two-metre-long aluminum tubes — hangs above the lobby in UBC's Centre for Integrated Computer Systems Research. It illustrates the difficulty of assembling simple geometric objects if you only have two hands (or, in the case of a robot, two manipulators) but work in a normal, three-dimensional space.

His current focus is on applications of computational geometry in Geographic Information Systems (GIS).

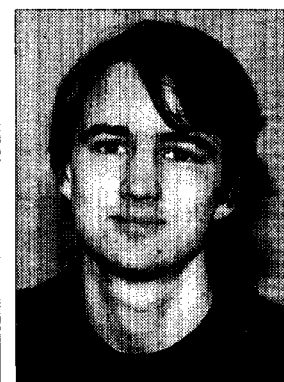
The university has also announced recipients of the Killam Research Prizes and another 13 faculty members who have won 1998-99 Killam Fellowships.

The \$10,000 UBC Killam Research Prizes are awarded annually to top campus researchers. The prizes, established in 1986, are equally divided between the arts and sciences.

Recipients are: Izak Benbasat, Commerce and Business Administration; Steve Calvert, Earth and Ocean Sciences; Ron Clowes, Earth and Ocean Sciences; Ken Lum, Fine Arts; Lawrence McIntosh, Biochemistry and Molecular Biology; Peter Quartermain, English; Arthur Ray, History; Cornelis Van Breemen, Pharmacology and Therapeutics; Rabab Ward, Electrical and Computer Engineering; and Mark Zacher, Political Science.

Isaac Walton Killam Memorial Fellowships top up faculty salaries while they are on sabbatical leave by up to \$15,000. Scholars also receive a \$3,000 grant for research and travel expenses.

Fellowship winners for 1998-99 are: Jutta Brunnee, Law; Brian Copeland, Economics; Sheldon Duff, Chemical and Bio-Resource Engineering; Mike Jackson, Electrical and Computer Engineering; Fiona Kay, Anthropology and Sociology; Anna Kindler, Curriculum Studies; Joshua Mostow, Asian Studies; Wesley Pue, Law; John Ries, Commerce and Business Administration; Neil Reiner, Medicine; and Bhagavatula S.R. Sastry, Pharmacology and Therapeutics. Rose Marie San Juan, Fine Arts, and J. Paul Russell, Philosophy, will also receive fellowships if sufficient funding is available.



**Snoeyink**



Stephen Forgacs photo

## Resting Space

**Space shuttle Discovery crew members (l-r) Curtis Brown, Bjarni Tryggvason, Robert Curbeam, Jan Davis, Stephen Robinson, and Kent Rominger relax outside Cecil Green Park House between appointments on their recent Vancouver visit. UBC graduate Tryggvason introduced the crew to members of the university community during a presentation earlier in the day. During the crew's mission, which blasted off Aug. 7, 1997, Tryggvason used a device he helped develop with UBC Electrical Engineering Assoc. Prof. Tim Salcudean. Called the Microgravity Isolation Mount, the device allows shuttle experiments to be conducted free from vibration.**

# Commuters asked to leave cars March 4

On March 4th, march forth!  
That's the message Gord Lovegrove, UBC's director of Transportation Planning, is putting out to the campus community.

Lovegrove is asking everyone who normally comes to campus in a single-occupant vehicle (SOV) to consider for just one day — March 4, Trek to UBC Day — an alternative means of getting to campus. That could mean cycling, walking, telecommuting, using public transportation, or car or van pooling.

"The purpose of Trek to UBC Day is to raise awareness on campus of the whole transportation issue, and to try to meet our overall goal of reducing single-occupant vehicle trips to campus by 20 per cent for at least one day," said Lovegrove. "We also want to show the Greater Vancouver Regional District, the City of Vancouver, BC Transit and other service providers that we're serious about this, but that we need their help."

"Ultimately it's about staff, students and faculty at UBC showing themselves that they can do it one day per week to hit the 20 per cent mark."

Lovegrove and the Student Environment Centre are asking for volunteers to help sign up participants. Volunteers will be asked to use sign-up forms to collect information on how individuals normally get to campus and what SOV-alternative

transportation they will use on March 4.

"We will be offering coupons for cinnamon buns and coffee at bicycle parking areas, the bus loop, and to car and van pool participants. Parking lot users may face higher than usual costs for that day only to cover the cost of the coupons," he said.

The UBC Trek Program Centre, which Lovegrove heads, has published a second discussion paper titled Options and Priorities.

This paper deals with options for resolving issues raised in the first paper published in January. It also identifies issues as long- or short-term priorities.

Students, faculty and staff are urged to get a copy and complete the brief questionnaire regarding the options and priorities. Both are available at various locations including: AMS Student Environment Centre (SUB second floor); University Services Building (second floor, 2329 W. Mall); and the West Point Grey and Dunbar public libraries.

The paper's executive summary and questionnaire are also available on the Trek Web site at [www.trek.ubc.ca](http://www.trek.ubc.ca).

Comments and questionnaires received over the next month will be used as the basis for developing the initial draft of the UBC Strategic Transportation Plan.

For information call the Trek Program Centre at 822-1304, or e-mail [trek@ubc.ca](mailto:trek@ubc.ca).

## Offbeat

by staff writers



A *Province* newspaper reviewer describes them like this: "They leave the competition in the dust! Soft, sweet and smooth. Not too thick, not too thin. They've got soul." "They" are UBC's legendary cinnamon buns.

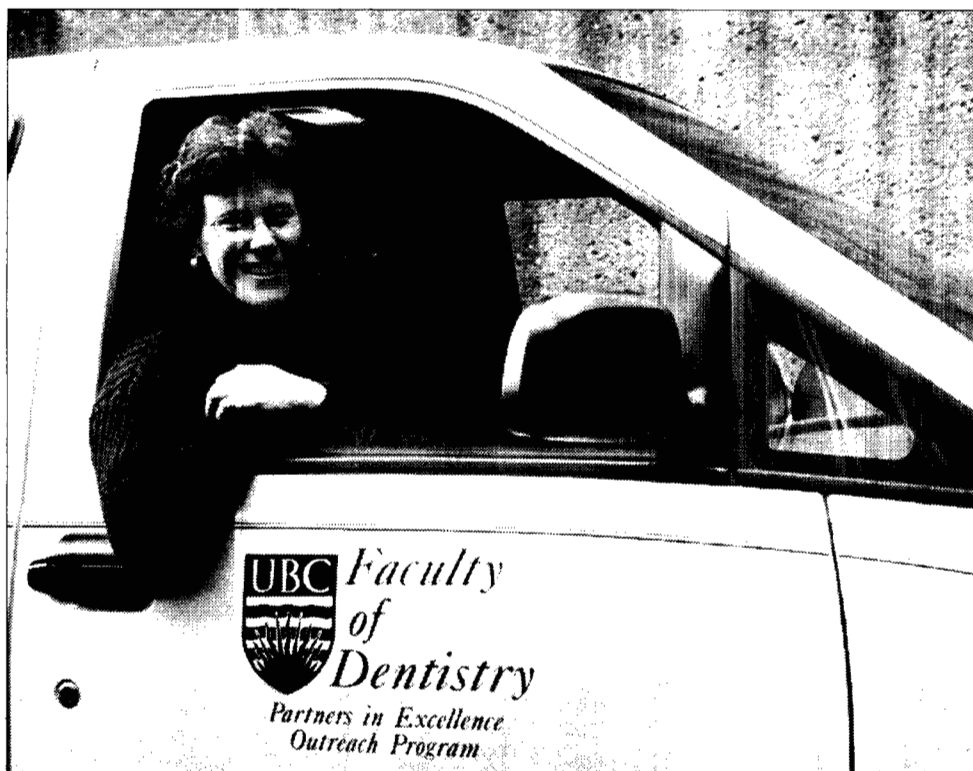
The buns, a longtime favourite in UBC's cafeterias and eateries, were recently ranked number one in Vancouver by the daily newspaper out of a field of bakery, café and food store buns.

"Light texture and a rich caramel/cinnamon flavour that's literally soaked-in make these a hugely satisfying way to combat morning sweet-tooth syndrome. No wonder these buns are legendary," *Province* reporter Anne Garber wrote.

Indeed, it's not the first time UBC's buns have emerged at the top of the heap. They are often rated best in Vancouver and UBC Food Services fields frequent calls for the recipe. UBC alumni are often heard to reminisce about the sticky treats. One recent Commerce graduate and Alumni Association award winner, who now lives in New York City, was lucky enough to have the faculty courier a couple of the sticky buns to her after she was heard saying how much she missed them.

In the latest ratings, UBC's buns, which scored a nine out of 10, beat out competitors from Solly's Bagelry, the Lazy Gourmet, Spa at the Century, The Café in the Century Plaza, Buns Master Bakery, Café Zoom, and The Real Canadian Superstore.





Hilary Thomson photo

**Asst. Prof. Michele Williams, Oral Biological and Medical Sciences, gets set to help take dental care to residents of long-term care facilities.**

## Dental clinic hits the road to care for aged

by Hilary Thomson

Staff writer

With dental equipment worth thousands of dollars resting in the back seat, Asst. Prof. Michele Williams doesn't bring the big white van to any sudden stops.

The equipment is one of the units that travels to long-term care facilities throughout B.C. as part of UBC's Dental Program for Seniors, a new mobile dental service for institutionalized elderly.

The program, which Williams directs, is the only one of its kind in B.C. and offers province-wide support for geriatric dentistry through treatment, training for dental students and continuing education for practicing dentists.

"Seniors in care are a truly underserved population, many of whom are challenging to treat because of multiple health problems," says Williams, who teaches in the Oral Biological and Medical Sciences Dept.

Self-contained portable units about the size of a mini-bar each contain a water supply, suction unit and generator for running state-of-the-art operating drills and other equipment. A high-powered gooseneck lamp can be connected to the unit and a separate tool kit holds sterile equipment and dental materials.

The mobile dental office plugs into any wall socket and can be rolled to a patient's bedside.

One of Williams' goals is to prepare

every graduating dentist to provide some geriatric services in his or her own community.

Patients at Lower Mainland care facilities are first screened by Williams, colleagues Mylene Boridy and Susan Birmingham, dental students and residents. The team then returns to complete the required dental work on a fee-for-service basis, allowing students to learn first hand the skills needed to care for the elderly.

Where the treatment required is too complex to be done on-site, team members care for the patients in hospital through a special agreement with Vancouver Hospital and Health Sciences Centre.

"Besides direct service we educate care aides, facility administrators and family members about oral hygiene for institutionalized seniors," says Williams. Four of the program's six portable units have been dispatched to regional health units across B.C. A fifth is used for research.

The portable units are a vital step towards building a network of B.C. dentists and dental hygienists working in geriatric care. Together with other faculty members, Williams offers province-wide continuing dental education on caring for B.C.'s approximately 23,000 institutionalized seniors.

Funding for the UBC Dental Program for Seniors is provided by the Seniors' Foundation of British Columbia.

## Bringhurst to lecture March 5

Author Robert Bringhurst joins the ranks of distinguished scholars such as Northrop Frye and Hugh MacLennan when he delivers the 1998 Sedgewick Memorial Lecture next month.

Named for Garnett Sedgewick, the first head of UBC's Dept. of English, the lecture has been a campus tradition for more than 30 years.

Bringhurst will refer to Sedgewick's 1928 essay on unity in the humanities while discussing his own interest in First Nations cultures and literatures.

A former lecturer in UBC's departments of English and Creative Writing, Bringhurst has written critical essays, 15 volumes of poetry, several works for

theatre and film and nine books including the forthcoming *Sharp as a Knife: An Introduction to Classical Haida Literature*.

Bringhurst's lecture, in the Great Hall of Green College at 4 p.m. on Thursday, March 5, is held in conjunction with a conference, *Perspective on Native American Oral Literatures*, that runs March 5-8.

Hosted by Green College and the First Nations House of Learning, the conference will bring together speakers, writers and storytellers such as scholar Dennis Tedlock, playwright Drew Hayden Taylor and storyteller Vi Hilbert.

## Study finds:

# Learning lacking from too many Web courses

by Gavin Wilson

Staff writer

Much of what Prof. Roger Boshier sees being passed off as on-line education on the World Wide Web is enough to make him throw up his hands in despair.

With its vast amounts of information and capacity for interaction, the Web has enormous potential for education. But most of what is now available is, in Boshier's opinion, little short of a travesty.

"Some Web courses are an unmitigated bore and represent little more than lecture notes posted on the Web," he says in a recent journal article. "At the other extreme are those laced with links, animation and more than enough glitter and glam to make Liberace wince."

Boshier, of the Dept. of Educational Studies, and graduate students in the Adult Education Research Centre surveyed 127 Web courses to see how they measured up.

Their study resulted in an academic paper, but also tongue-in-cheek presentations of a Madonna Award for the best dressed site and a Drab and Nameless Award for the worst dressed.

Ideally, Boshier says, "The Web can function less like a traditional classroom and more like a library where a person can browse, talk with people involved with the program and others not in the course but with similar interests."

Boshier and his colleagues took the position of customers, looking for stand-alone Web courses that could be completed entirely without face-to-face interaction with an instructor.

Most of the courses were based at universities and colleges, mainly in the United States, but also in Canada, Australia and the United Kingdom. Topics ran the gamut of science, business, computers, social sciences and education.

The researchers found that disappointingly few courses used much of the Web's interactive capability, Boshier said.

Many merely try to replicate face-to-face courses, filling their Web site with lecture notes and other text. Some were difficult to navigate or even read. Others had muddled concepts and lacked links to other sites or potential for students to provide feedback.

These are not technological problems, Boshier pointed out. Instead, too many course designers view students as passive recipients of information and not partners in collaborative learning, he said.

The best courses, on the other hand, were easy to navigate, involved high levels of interaction, rewarded creativity and made use of the enormous resources of the Web.

Some of their features included graphics, animation, video, audio, threaded discussions, student chat rooms, e-mail, space to post student work and links to other relevant sites.

"More creative courses had learners leave the home site to do research on relevant sites, then post

their findings for all learners to use," Boshier said.

For example, a University of Texas geology course has students use the Web to locate an earthquake that has occurred in the previous 24 hours. Working in groups, they answer a series of questions about it and then post the results for all to see.

Boshier and his colleagues gave the Madonna Award to a history course at the University of Wisconsin. The worst site was judged to be an Illinois State University education course.

Boshier and his colleagues have now turned their attention to other issues involving education on the Web, including American dominance of the medium.

"There is a sense that America is the centre, and the rest of the world the periphery," Boshier said. "The reality of people from smaller nations, indigenous people and non-English-speaking people is not reflected on the Web."

**"Some Web courses are an unmitigated bore..."**

— Prof. Roger Boshier

## Math goes to work for B.C.'s major industries

The UBC-based Pacific Institute for the Mathematical Sciences (PIMS) will apply high-level mathematical methods to help develop B.C.'s major industries, thanks to recently announced funding from the provincial Information, Science and Technology Agency (ISTA).

In an intensive weeklong workshop last year, PIMS gathered over 80 mathematical scientists, including 30 graduate students, to analyse problems presented by the B.C. Cancer Agency, MacMillan Bloedel, Petro-Canada and other companies. The workshop's success has led the institute to create an annual industrial workshop with monthly industrial problem-solving seminars in between.

"B.C.'s economy is diversifying at a rapid rate, and technology-based industries are taking their place in the market and playing an important role in job creation," Dan Miller, minister responsible for the ISTA said when the funding was announced. "The application of mathematics to daily challenges found in many sectors is leading to increased productivity."

PIMS, which opened in 1996, is Cana-

da's newest and third institute for the mathematical sciences. It will become the central co-ordinating agency for activities of mathematical scientists at the universities of Alberta, B.C., Calgary, Victoria and Simon Fraser University.

The institute is involved in a range of projects including scientific workshops, conferences and summer schools on topics ranging from mathematical finance to high-performance computing and the development of a National Network for Mathematical Sciences.

"We are very optimistic about the scope and depth of research that can be conducted now that PIMS is becoming part of the intellectual fabric of B.C. and western Canadian enterprises," said PIMS director Prof. Nassif Ghoussoub.

PIMS is in the process of developing a new national network called Mathematics of Information Technology And Complex Systems (MITACS) in collaboration with its sister institutes in Ontario and Quebec as part of the federal Networks of Centres of Excellence (NCE) program. MITACS is one of only 10 groups that has been invited to submit a full NCE proposal.



Scott Urquhart photo

### Use Your Noodle

**A kayak noodle-jousting team readies for takeoff during UBC Rainfest, one of the events in the month-long Rain Festival organized by UBC's Intramural Sports and Recreation program. Eight teams battled at the Aquatic Centre recently for the coveted Rainfest title with Science One's Psi One Floyd team declared overall winner. Rain Festival events continue to February 28.**

## Survivor makes crowd think about assault

by Hilary Thomson

Staff writer

They were crammed into every corner. Hundreds of students from Place Vanier and Totem Park residences were perching on window ledges, crowding the aisles and standing in the doorway.

But you could have heard a pin drop as date rape survivor and sexual assault prevention activist Katie Koestner told her story.

In a presentation called No/Yes sponsored by the residence associations, Housing and Conferences, the Women Student's Office, and Health, Safety and the Environment, Koestner told more than 650 students in residence how to help prevent rape.

Weeks later her words are on still on the minds of those who attended.

"It was an impressive turnout," says Janet Cox, residence life manager. "Students are still talking about the ideas presented and questioning each other's actions and beliefs."

In 1990, Koestner was raped by a fellow student she had been dating during her first year at college in Virginia.

It was several days before Koestner decided to report the crime. A lawyer advised against a criminal proceeding because no evidence had been gathered at the time of the assault. When she persuaded the dean of the college to conduct a hearing, the accused was found guilty of rape.

The experience led Koestner to a career of activism aimed at preventing campus sexual violence.

"This is a crime of silence," says Koestner. "Bringing it into the open is the first step in prevention."

Second-year Science student Ross Woo, a resident of Totem Park, agrees. "Nothing's ever said about rape because

of shame," he says. "The presentation was an eye-opener and a reminder that it still happens."

Students are at greatest risk of sexual assault in the first three months at school Koestner says — a period she calls the "red zone."

Starting relationships with strangers, absence of parental supervision, availability of and peer pressure to use drugs and alcohol and a motivation to fit in are factors that make a first-year student vulnerable to victimization.

"The media portray rape as some weird guy grabbing you in a dark alley," says Totem Park residence floor representative Katie Scozzafava. "I was surprised to hear that 84 per cent of the time the rapist is someone you know."

Koestner's recommendations for prevention include communication about sexual issues, especially consent. She also promotes responsibility in drinking and the use of drugs; 90 per cent of college sexual assaults involve alcohol.

Simple respect for oneself and others is critical, Koestner says. She encourages students to take a stand against victimization, which she says ranges from verbal sexual abuse and jokes about assault to rape itself.

The presentation was Koestner's first appearance at a Canadian campus. She has spent the past four years speaking at colleges across the United States where resources range from nothing to established protocols for responding to the crime.

At UBC, the Women Students' Office provides counselling to students and offers workshops on acquaintance sexual assault and personal safety in public places.

The UBC Sexual Assault Information Line at 822-9090 offers recorded information about what to do in the event of an assault.

## Exhaustive data proves global fisheries in crisis

by Sean Kelly

Staff writer

Fisheries Centre Prof. Daniel Pauly has hard evidence to back up what many scientists have long suspected — marine fisheries are in a global crisis.

In an article which appeared in the Feb. 6 issue of the journal *Science*, Pauly and four co-authors demonstrate a shift in global fisheries catches away from predators high in the food web, like snapper, halibut and tuna, towards plankton-eating species lower in the food web, like anchovies and shrimp.

Pouring over 50 years of United Nations catch data, the researchers show conclusively that as fishers decimate larger predators, they move systematically down the food web to smaller plankton eaters.

"When we remove big predators and go after their smaller prey, we are ripping the fabric of these webs, and endangering their ability to produce harvestable fish at any level," Pauly says.

He points to the east coast of Canada, where the shrimp fishery has expanded since the cod were fished out. Since cod feed on shrimp, Pauly warns that the increased fishing of shrimp may hinder the recovery of cod stocks.

In case after case around the world, targeting smaller and more abundant plankton eaters at first leads to increasing large catches, but the resulting disruption of the ecosystem soon results in stagnating or declining catches.

This pattern of destruction, which Pauly calls "fishing down the food web," is worst in the northern hemisphere, with its highly efficient and technologically advanced fishing fleets.

Pauly says if present exploitation patterns continue the only fish in the seas in about 25 years will be lanternfish, jellyfish and krill.

Creating large 'no-take' marine protected areas may be the only way to avoid the widespread collapse of fisheries and rebuild healthy food webs, he says.

The research is another nail in the coffin of traditional fisheries management, says Pauly.

"Current fisheries management only worries about the health of

particular fisheries within the fishing industry," he says. "Instead, we should be focusing on the health of ecosystems, and the consequences of extracting single species stocks from the system."

Pauly conducted the research with Fisheries Centre graduate student Johanne Dalsgaard, and three researchers from the International Centre for Living Aquatic Resources Management in the Philippines.

The researchers analysed catch data for 1,300 different groups of marine species covered in the official statistics of the United Nations' Food and Agricultural Organization since 1950. These statistics were then compared against 60 published food web models for all major aquatic ecosystems.



Pauly

## AMS head set to tackle threats to education

by Sean Kelly

Staff writer

Student debts, government funding and campus events are on the agenda of the newly elected president of the Alma Mater Society (AMS).

Second-year Arts student Vivian Hoffmann will take over the top spot Feb. 27 after her recent election win.

Approximately 13 per cent of 33,000 eligible UBC students cast votes in the election.

Hoffmann intends to lobby the provincial government to make sure universities are adequately funded.

"We've seen funding levels erode, especially over the past five to eight years, and the quality of education is threatened by that," she says.

She also plans to join forces with other student groups to pressure the federal government to initiate national grants to mitigate rising student debts.

Hoffmann previously served as AMS director of finance.

No stranger to student activism, she helped organize opposition to the federal government's proposal to cut funding for post-secondary education in 1995.

One of her challenges, she says, will be keeping the lines of communication open between a politically diverse AMS

executive.

"The members all have different viewpoints," Hoffmann says. "But we all want the best for UBC students, so I'm confident we'll work well together."

Joining Hoffmann on the executive are: Neena Sonik, third-year Commerce, vice-president; Ryan Marshall, fourth-year Theatre, co-ordinator of external affairs; Scott Morishita, second-year Science, director of administration; and Sandra Matsuyama, fourth-year Commerce, director of finance.

Fourth-year International Relations and Asian Studies student Jennie Chen will serve a one-year

term as student representative to the Board of Governors. Joining her is James Pond, a PhD candidate in Physics.

Five student senators have also been elected for 1998, as well as eight student senators from individual faculties. There were no Senate nominations for the faculties of Agricultural Sciences, Dentistry, Forestry and Pharmaceutical Sciences, but senators may be appointed at a later date.

Lack of a quorum voided election week referenda asking for student fee increases for Pacific Spirit Family and Community Services and the AMS Clubs Benefit Fund. A referendum on whether to index the AMS membership fee to the B.C. Consumer Price Index was also declared void.



Hoffmann

# Calendar

## February 22 through March 7

### Sunday, Feb. 22

#### Anjani's Kathak Dance Of India

Dance, Drama And Song Highlighting India's Rich Cultural Heritage. Chan Shun Concert Hall at 8pm. Call 822-9197.

#### Green College Performing Arts Group

John Doherty Jazz Quintet. Green College at 8:15pm. Call 822-1878.

### Monday, Feb. 23

#### Lectures In Modern Chemistry

Bimetallic Reactions Of Pyrazolato-Bridged Rhodium And Iridium Complexes. Prof. Luis A. Oro, U of Zaragoza. Chemistry D-225 (centre block) at 11:30am. Call 822-3266.

#### Institute Of Health Promotion Research Seminar

Put Prevention Into Practice: Implementation And Impact Of An Office System To Increase Clinical Preventive Services Delivery. Prof. Neil Gottlieb, U of Texas. Vancouver Hosp/HSC, Detwiler Pavilion, 2 north (A and B) second floor, north wing from 12:30-2pm. Call 822-2258.

#### International Student Services Workshop

First Nations' Legends And Stories Discussion. International House and First Nations House of Learning from 1-3pm. Pre-register at International House. Space limited to 35 persons. \$2; \$1 ISS-ESL students. Call 822-5021.

#### Institute Of Applied Mathematics Distinguished Colloquium Series

Nonlinear Conservation Laws And Longwave Models Of Solidification: Self-Similar Blow-Up And Its Regularization. Andrew J. Bernoff, Applied Mathematics Northwestern U. CSCI 301 at 3:30pm. Call 822-4584.

#### Mechanical Engineering Seminar

The Effective Use Of Patent Information. Ron Simmer, Patent Service Librarian. CEME 1204 from 3:30-4:30pm. Light refreshments. Call 822-3770.

#### Astronomy Seminar

Cloning, Lensing And Dropouts In Deep Hubble Space Telescope Images. Tom Broadhurst, U of California. Hennings 318 at 3:30pm. Refreshments at 3:30pm. Call 822-2267.

#### Green College Resident Speaker Series

Just Then The Stripper - Meaning And The Tragically Hip. Arnie Guha, English. Green College at 5:30pm. Call 822-1878.

### Tuesday, Feb. 24

#### Third International Mathematics And Science Study

Grade 12 Results. David F. Robitaille, International Coordinator. Scarfe 310 at 10am. Call 822-9136.

#### Continuing Studies Lecture Series

International Scene - Chile And The Politics Of Pragmatism. Alejandro Palacios, Economic and Social Development Institute of Indigenous Government. Downtown Vancouver Public Library Peter Kaye Room from 12noon-1:30pm. Pro-rated fees. Call 822-1450.

#### Microbiology And

**Immunology Seminar Series**  
Burkholderia Cepacia, A Multi Drug Resistant Opportunistic Pathogen. Barbara McKay. Wesbrook 100 from 12:30-1:30pm. Call 822-3308.

#### Pacific West Coast Inorganic Lecture

Controlling The Molecular Architecture Of Low Nuclearity Poly-Rhodium And Iridium Complexes. Prof. Luis A. Oro, Chemistry, U of Zaragoza. Chemistry B-250 (south wing) at 1pm. Refreshments from 12:40pm. Call 822-3266.

#### John Davidson Memorial Lecture

The Role Of Hybridization In The Evolution Of Packera: Speculations Based On Molecular Data. John Bain, U of Lethbridge. BioSciences 2000 from 12:30-1:30pm. Call 822-2133.

#### Metals And Materials Engineering Seminar

Effect Of Homogenization On Aluminum Microstructure/Particle Evolution In AA<sup>3xxx</sup> Aluminum Alloys. Chetak Gandhi. Frank Forward 317 at 3:30pm. Call 822-1918.

#### Oceanography Seminar

Wave-Resolving Radar Observations Of The Sea Surface. Craig L. Stevens, National Institute Of Water And Atmospheric Research. BioSciences 1465 at 3:30pm. Call 822-3278.

#### Political Science Seminar

After The Thaw: The Changing Dutch Party System And The Parties Literature. Prof. Steven Wolinetz. Buchanan B-323 from 3:30-5pm. Call 822-2717.

#### Statistics Seminar

Asymptotic Normality Of Goodness-Of-Fit Statistics For Sparse Poisson Data. Ursula Mueller, Mathematics and Statistics, U of Bremen. CSCI 301 from 4-5:30pm. Refreshments. Bring your mug. Call 822-0570.

#### Centre For Applied Ethics Colloquium

Coercive Treatment Of Eating Disorders. Chris MacDonald, Philosophy. Angus 415 from 4-6pm. Call 822-5139.

#### Graduate And Faculty Christian Forum

George Herbert's Poetry And The Theology Of Praise. Prof. Paul Stanwood, English. Buchanan low-rise penthouse at 4:15pm. Light refreshments at 4pm. Call 822-4351.

#### Green College Speakers' Series

John Locke And Colonial Policy. Barbara Arniel, Political Science. Green College at 5:30pm. Reception Graham House from 4:45-5:30pm. Call 822-1878.

#### Continuing Studies Lecture Series

Women In Film: Femmes Fatales And Female Filmmakers. Katie Weekley, Film Studies. Chan Centre Royal Bank Cinema from 7-10pm. Continues to Mar 31. \$75; \$54 seniors; \$60 TAS members. Call 822-1450.

#### Green College Special Lecture

Mami Wata: The Life And Times Of An African Mermaid. Elizabeth Isichei. Green College at 8pm. Call 822-1878.

### Wednesday, Feb. 25

**Orthopedics Grand Rounds**  
Serology In Tibial Fracture Healing. Dr. N. Kurdy, BC Children's

Hosp. Vancouver Hosp/HSC, Eye Care Centre Aud. at 7am. Call 875-4192.

#### Surplus Equipment Sale

Task Force Warehouse from 12noon-5pm. Call 822-2582 or 822-2813.

#### Netherlandic Studies Visitor Public Lecture

The Dutch Economy - From Dutch Disease To Dutch Miracle: The Political Foundations Of Dutch Economic Success. Prof. Steven Wolinetz, Political Science, Memorial U. Buchanan A-202 from 12:30-1:30pm. Call 822-2717.

#### Wednesday Noon Hour Concert

Mark Levine, jazz piano; Andre Lachance, bass. Music Recital Hall at 12:30pm. Admission \$3 at the door. Call 822-5574.

#### Immigration Information Session

Immigration Information For People Interested In Obtaining Permanent Residence In Canada. Robert McLeman, vice-consul, Immigration, Canadian Consulate General. Graduate Student Centre Thea's Lounge from 12:30-1:30pm. E-mail Michael Hughes at [hughes@physics.ubc.ca](mailto:hughes@physics.ubc.ca).

#### Obstetrics And Gynecology Research Seminars

Inhibitory Effects Of Cholesterol On Progesterone-Induced Acrosome Reaction Of Human Sperm. Dr. Gregory Lee, BC Women's Hosp 2N35 at 2pm. Call 875-3108.

#### BC Advanced Systems Institute (ASI) Industry/Academic Lecture Series

Halting The Brain Drain - BC High Tech Entrepreneurship. Haig Farris, Commerce. AMPEL 311 from 3:30-4:30pm. Refreshments. Call 822-6601.

#### Centre for Research In Women's Studies And Gender Relations Lecture Series

Theorizing About Nurses' Work Lives: The Personal And Professional Aftermath Of Living With Health Care "Reform." Barbara Keddy, Nursing, Dalhousie U. Women's Studies Centre at 3:30pm. Call 822-9171.

#### President's Lecture In Philosophy

Moral Motivation And The Authority Of Morality. Prof. David Brink, U of California. Buchanan A-203 from 4-5:30pm. Call 822-3967.

#### Evolution, Ecology And Biodiversity Seminars

The Evolution Of Human Trisomy: A Case Study In Darwinian Medicine. Troy Day, Queen's U. Family and Nutritional Sciences Centre 60 at 4:30pm. Refreshments. Hut B-8 at 4pm. Call 822-3957.

#### Respiratory Research Seminar Series

Diesel Exhaust And Lung Cancer. Dr. Frank Speizer, Medicine, Harvard Medical School. Vancouver Hosp/HSC, doctors' residence, third floor, conference room from 5-6pm. Call 875-5653.

#### Creative Writing Readings

Brave New Play Rites. Chan Centre BC Tel Studio Theatre at 7:30pm; 9:30pm. Continues to Feb. 27. Call 822-9197.

#### 19th Century Studies

Idylls Of The Farm Visual (Mis)Representations Of Thomas Hardy's *Far From The Madding Crowd*. Pamela Dalziel, English. Green College at 8pm. Call 822-1878.

### Thursday, Feb. 26

#### President's Speakers Series

Sacajawea And Her Sisters: Images And Indians. Gail Guthrie Valaskakis, First Nations House of Learning from 12noon-2pm. Call Ethel Gardner 822-8942.

**Science First Lecture Series**  
**Degenerative Disease: Unraveling The Unraveling Brain.** Dr. Lynn Raymond; Dr. Peter Reiner, Psychiatry. Wesbrook 100 from 12:30-1:30pm. Website [www.science.ubc.ca/seminars/seminarseries.html](http://www.science.ubc.ca/seminars/seminarseries.html) or call 822-5552.

#### Faculty Recital

Alan Rinehart, guitar. Music Recital Hall at 12:30pm. Call 822-5574.

#### Philosophy Colloquium

Realism, Naturalism And Moral Semantics. Prof. David Brink, U of California. Buchanan D-121 from 1-2:30pm. Call 822-3967.

#### Invited Speaker Seminar

Convergence Proofs For Numerical Software. Andrew Stuart, Stanford U. CICS/CS 208 from 4-5:30pm. Refreshments. Call 822-0557.

#### Genetics Graduate Program Seminar Series

Protein Tyrosine Phosphatase-Epsilon: An Enzyme In Search Of A Function - Production And Studies Of Mutant Mice. Scott Pownall, Wesbrook 201 at 4pm. Refreshments. Call 822-8764.

#### Biostatistics Seminar

Edge Effects In Understorey Vegetation Due To Clearcutting: A Statistician's Introduction To Ordination Methods Used In Forestry. Mary Lesperance, Math and Statistics, UVic. CSCI 301 from 4-5:30pm. Call 822-0570.

#### Medieval And Renaissance

Courtliness, Fetishism And Storytelling: Nouvelle 57 Of Marguerite De Navarre's Heptameron. Nancy Frelick, French. Green College at 4:30pm. Call 822-1878.

#### B.C. Food Technology Student Night

Food Irradiation. Various speakers. Chan Centre from 6:30-8:30pm. Registration at 6:30pm. Students, \$15; Non-students, \$20. Call 822-3404.

#### Law And Society Seminar

Lawyers And Liberalism. Terry Halliday, American Bar Foundation. Green College at 8pm. Call 822-1878.

#### Green College Performing Arts Group

Interbation - A Play. Colleen Subasic. Green College Great Hall at 8:30pm. Call 822-1878.

### Friday, Feb. 27

#### Health Care And Epidemiology Rounds

The Menstrual Cycle Effect On Breast Cancer Diagnosis And Treatment. Dr. Corneilia Baines, Preventative Medicine and Biostatistics, U of Toronto. Mather 253 from 9-10am. Call 822-2772.

#### Interdisciplinary Studies/ Green College Symposium

Inside The Kaleidoscope: Interpreting Interdisciplinarity. Julie Thompson Klein, Wayne State U. Green College from 9am-6pm. Registration 8:30am. \$10. Continues to Feb. 28. Website [www.interchange.ubc.ca/iisgpor](http://www.interchange.ubc.ca/iisgpor) call 822-0954.

#### Pediatric Grand Rounds

Protecting Patients From Antimicrobial Resistant Infections Now And In The Future: The Case For More Judicious Antimicrobial Use. Dr. Ben Schwartz, Centers for Disease Control and Prevention. GF Strong Aud. at 9am. Call 875-2307.

#### Fish500 Seminars

Trout In Space. Mike Thoms, History. Management Approaches To Lake Malawi. Edward Nsiku, Fisheries Centre. Hut B-8, Ralf Yorke Room. Refreshments at 11am. Call 822-2731.

#### Pharmaceutical Sciences Seminar

Lipoprotein Metabolism And Lipoprotein Receptors. Wesley Wong, Pharmacology and Toxicology. Cunningham 160 from 12:30-1:30pm. Call 822-7795.

#### Occupational Hygiene

Work Place Psychosocial Stress And Mortality Among Sawmill Workers. Aleck Ostry, Health Care and Epidemiology. Vancouver Hosp/HSC, Koerner Pavilion G-279 from 12:30-1:30pm. Call 822-9302.

#### Master Series Seminar

Screenwriting. Ian Weir, Dennis Foon, Peggy Thompson, moderator. Chan Centre Royal Bank Cinema at 12:30pm. Call 822-0699.

#### English Lecture

Robert Burns And Music. David Johnson, composer and musicologist. Buchanan D-244 at 12:30pm. Call 822-4225 or 822-9824.

#### Special Service

Celebration Of The Life Of Professor J. Keith Brimacombe, 1943-1997. St. Mark's College Chapel at 2pm.

## UBC REPORTS

### CALENDAR POLICY AND DEADLINES

The *UBC Reports* Calendar lists university-related or university-sponsored events on campus and off campus within the Lower Mainland.

Calendar items must be submitted on forms available from the UBC Public Affairs Office, 310-6251 Cecil Green Park Road, Vancouver B.C., V6T 1Z1. Phone: 822-3131. Fax: 822-2684. An electronic form is available on the *UBC Reports* Web page at <http://www.publicaffairs.ubc.ca>. Please limit to 35 words. Submissions for the Calendar's Notices section may be limited due to space.

Deadline for the March 5 issue of *UBC Reports* — which covers the period March 8 to March 21 — is noon, February 24.



# Calendar

## February 22 through March 7

### Chemical Engineering Weekly Seminar

Quantification Of The Direct Rate Played By Sulfate Reducing Bacteria In Precipitation Of Copper Sulfides. K. Jalali, Bio-Resource Engineering. ChemEng 206 at 3:30pm. Refreshments ChemEng 204 at 3:15pm. Call 822-3238.

### Linguistics Colloquium

Some Issues In Applied Linguistics: The Perception Of Foreign-Accented Speech. Murray Munro, SFU. Buchanan penthouse at 3:30pm. Refreshments. Call 822-4256.

### Mathematics Colloquium

Martingales And Duality In Contingent Claims Analysis: The Discrete Case. Alan J. King, Mathematical Sciences, IBM Research. Math 100 at 3:30pm. Refreshments Math Annex 1115 at 3:15pm. Call 822-2666.

### Physical Chemistry Seminar

Polymer Brushes Near Interfaces. Roman Baranowski, Chemistry. Chemistry D-225 (centre block) at 4pm. Call 822-3266.

### International Dance

Music From Around The World. International House upper lounge from 8:30pm-1am. Admission \$3. Call 822-5021.

### Saturday, Feb. 28

#### Creative Writing Readings

Brave New Play Rites. Chan Centre BC Tel Studio Theatre at 1:30pm, 3:30pm, 7:30pm, 9:30pm. Call 822-9197.

#### Operatic Excerpts Concert

UBC Opera Ensemble, UBC Choral Union, The Vancouver Philharmonic. Chan Centre at 8pm. Tickets available through Ticketmaster. Call 280-3311.

### Vancouver Institute Lecture

A River In Time: The Natural History Of The Fraser River. Prof. Michael Church, Geography. IRC #2 at 8:15pm. Call 822-3131.

### Sunday, Mar. 1

#### UBC Music Concert

Relyea Voices. Chan Centre at 3pm. Tickets available through Ticketmaster. Call 280-3311.

#### Creative Writing Readings

Brave New Play Rites. Chan Centre, BC Tel Studio Theatre at 1:30pm and 3:30pm. Call 822-9197.

### Green College Performing Arts Group

Quintet: Five Women Poets Read From Their Work. Green College at 8pm. Call 822-1878.

### Monday, Mar. 2

#### Motivational Lecture

Overcoming Challenges. Sylvia VanKempen, Marily Toews, Chairiots Communications. SUB conversation pit from 12:30-1:30pm. Call 299-4123.

### Mechanical Engineering Seminar

Laparoscopic Spinal Implants: Research Development And Current Issues. Dr. Thomas Oxlund, Director, Orthopedic Engineering Research. CEME 1204 from 3:30-4:30pm. Light refreshments. Call 822-3770.

### Astronomy Seminar

FG Sagittae - Update. Guilelmo Gonzales, U of Washington. Hennings 318 at 4pm. Light refreshments at 3:30pm. Call 822-2267.

### Green College Resident Speaker Series

When The Fat Lady Sings. James McLennan, Music. Green College at 5:30pm. Call 822-1878.

### Science And Society

Mandated Science: Tasks For Science Studies. Ed Levy, QLT Pharmaceuticals. Green College at 8pm. Call 822-1878.

### Tuesday, Mar. 3

#### Continuing Studies Seminar

International Scene - Germany Facing The 21st Century. Steven Taubenek, Germanic Studies. Downtown Vancouver Public Library Peter Kaye Room from 12noon-1:30pm. Pro-rated fees. Call 822-1450.

### Microbiology And Immunology Seminar Series

Microbial Degradation Of The Polysaccharides In Plant Cell Walls. R.A.J. Warren. Wesbrook 100 from 12:30-1:30pm. Call 822-3308.

### Botany Seminar

Linking Variation Among Populations, Communities And Landscapes In Subalpine Forests Of Wells Gray Park. Gary Bradfield. BioSciences 2000 from 12:30-1:30pm. Call 822-2133.

### Lectures In Modern Chemistry

Recent Advances In Asymmetric Catalysis. Method Development And Applications To Total Synthesis. Prof. Amir Hoveyda. Boston College. Chemistry B-250 (south wing) at 1pm. Refreshments from 12:40pm. Call 822-3266.

### Irving K. Fox Lecture Series

Mighty River: A Portrait Of The Fraser. Richard Bocking, IRC #6 at 3:30pm. Call 822-1482 or 822-4705.

### Metals And Materials Engineering

Working With The Synthetic Elements. Phil Horwitz, Frank Forward 317 from 3:30-4:30pm. Call 822-1918.

### Green College Speakers' Series

Performance By Heather E. Pawsey, soprano; Christopher Foley, piano. Green College at 5:30pm. Reception Green College Coach House from 4:45-5:30pm. Call 822-1878.

### Readings

An Evening With Rilke - Readings From The Duino Elegies And Other Poetry And Prose In New Translations. Graham Good. Green College Coach House at 7:30pm. Call 228-8955.

### Wednesday, Mar. 4

#### Orthopedics Grand Rounds

Challenging And Intriguing Orthopedic Adventures From The Case Files Of The Division Of Athletic Injuries And Arthroscopic Surgery. Dr. J.P. McConkey, Vancouver Hosp/HSC, Eye Care Centre Aud. at 7am. Call 875-4192.

### Wednesday Noon Hour Concert

Meg Sheppard, alces lanza, music-theatre-electronics. Music Recital Hall at 12:30pm. Admission \$3 at the door. Call 822-5574.

### Community And Regional Planning Seminar

Ecology And Community Design: Lessons From Northern European Ecological Communities. Todd Saunders, environmental planner.

Lasserre 107 from 12:30-1:30pm. Call 822-3914.

### Obstetrics And Gynecology Research Seminars

Ovarian Cancer: A General Overview. Dr. Monique Bertrand, Gynecology. BC Women's Hosp 2N35 at 2pm. Call 875-3108.

### Institute Of Applied Mathematics Colloquium

TBA. Prof. Alain Fournier, Computer Science. CSCI 300 at 3:30pm. Call 822-4584.

### Evolution, Ecology And Biodiversity Seminars

A Bayesian Analysis Of Gray Whale Population Dynamics: Is Density-Dependence Occurring? Paul Wade. Family and Nutritional Sciences Centre 60 at 4:30pm. Refreshments Hut B-8 at 4pm. Call 822-3957.

### Respiratory Research Seminar Series

Lung Health - A Global Priority. Dr. Donald Enarson, Medicine, U of Alberta. Vancouver Hosp/HSC, doctors' residence, third floor conference room from 5-6pm. Call 875-5653.

### The Interdisciplinary Seminar

Risks And Disciplines. Richard Ericson, Principal, Green College. Green College at 5pm. Call 822-0954.

### Cultural And Media Studies Interdisciplinary Group

Culture And/Or Show Business: The Current Economics Of Presenting The Performing Arts. Michael Noon, Director, Chan Centre. Green College at 7:30pm. Call 822-1878.

### Graduate Student Conference

Perspectives On Native North America Oral Literature: Carved In The Air Like Spoken Music. Green College. \$70; \$50, students. Website www.library.ubc/xwi7xwa/ or e-mail gudrund@unixg.ubc.ca; borrows@law.ubc.ca.

### Thursday, Mar. 5

### Continuing Studies Lecture Series

Human Evolution. Braxton Alfred, Anthropology. Downtown Vancouver Public Library from 10-11:30am. Continues to Mar. 26. \$50; \$40 seniors; \$35 TAS members. Call 822-1450.

### Biotechnology Lab Seminar

Bioprocess Strategies And Technologies To Reduce Biopharmaceutical Development Cycle Times. Mike Glacken, Wesbrook 201 at 12noon. Refreshments. Call J. Piret 822-5835.

### Earth And Ocean Sciences Colloquia

The Great Earthquake In South Western B.C. John Clague, GeoSciences 330-A at 12:30pm. Call 822-3278.

### Science First Lecture Series

Perception And Cognition: The Seeing Brain, The Thinking Eye. Dr. Deborah Giaschi, Ophthalmology; James Enns, Psychology. Wesbrook 100 from 12:30-1:30pm. Website www.science.ubc.ca/seminars/seminarseries.html or call 822-5552.

### Genetics Graduate Program Seminar Series

TBA. Dr. Leroy E. Hood, Molecular Biology, U of Washington. IRC #6 at 4pm. Refreshments. Call 822-8764.

### 1998 Sedgewick Memorial Lecture

Native America Oral Literatures And The Unity Of The Humanities. Robert Bringhurst, author, lecturer, scholar. Green College Great Hall at 4pm. Call 822-9569.

### Policy Issues In Post-Secondary Education In B.C.

Who Goes? Who Pays? A Seminar On Financial Barriers To Post-Secondary Access And Possible Remedies. Green College at 4:30pm. Call 822-1878.

### G. Peter Kaye Lectures

A Christian Address To Our Dangerously Religious World When The Committed Turn Uncivil. Martin E. Marty, U of Chicago. Vancouver School of Theology Epiphany Chapel at 7:30pm. Call 822-9815.

### Friday, Mar. 6

#### Pediatric Grand Rounds

Neuroblastoma Screening In Children. Dr. Mark Bernstein, McGill U. GF Strong Aud. at 8:30am. Call 875-2307.

### Health Care And Epidemiology Rounds

One World, One Hope: The Cost Of Making Anti-Retroviral Therapy To All Nations. Dr. Robert Hogg, BC Centre for Excellence in HIV/AIDS. Mather 253 from 9-10am. Paid parking avail in Lot B. Call 822-2772.

### Fish500 Seminars

Assessment Of Icelandic Flatfish Stock. Hreidar Valtysson, Fisheries Centre. The Role Of Shoaling Behaviour In The Spatial Dynamics Of Stock Collapse In Fisheries. Nathaniel Newlands, Fisheries Centre. Hut B-8 Ralf Yorke Room at 11:30am. Refreshments at 11am. Call 822-2731.

### Occupational Hygiene Program Seminar Series

Effectiveness Of Engineering Controls In Preventing The Spread Of Tuberculosis. Shelly Miller, Mechanical Engineering, U of Colorado. Vancouver Hosp/HSC, Koerner Pavilion G-279 from 12:30-1:30pm. Call 822-9302.

### G. Peter Kaye Lectures

A Christian Address To Our Dangerously Religious World: When The Civil Are Uncommitted. Martin E. Marty, U of Chicago. Vancouver School of Theology Epiphany Chapel at 12:30pm. Call 822-9815.

### Foreign Affairs And International Trade Canada (DFAIT) Lecture Series

Negotiating The Creation Of A Permanent International Criminal Court. Prof. Roger S. Clark, Rutgers U. Curtis 101/102 from 12:30-2:30pm. Panel discussion to follow. Call 822-9875.

### Germanic Studies Lecture

Lecture On Her Work. Nelleke Noordervliet, Dutch novelist. Buchanan penthouse at 12:30pm. Call 822-5178.

### Pharmaceutical Sciences Seminar

Effects Of Insulin, Vanadium And Diabetes On Glycogen Synthase-3 (GSK-3) Activity In Rat Skeletal Muscle. Sabina Semiz, Pharmacology and Toxicology, Cunningham 160 from 12:30-1:30pm. Call 822-4645.

### Evolution, Ecology And Biodiversity Seminars

Theory Versus History: Learning From Past Debates In Population Biology. Sharon Kingsland, Philosophy, Johns Hopkins U. Family and Nutritional Sciences Centre 60 at 3:30pm. Call 822-3957.

### Chemical Engineering Weekly Seminar

Bone Marrow Culture Process Development. J. Audet. ChemEng 206 at 3:30pm. Light refreshments ChemEng 204 at 3:15pm. Call 822-3238.

### Linguistics Colloquium

Towards A Kaska Voice. Pat Moore, U of Indiana. Buchanan penthouse at 3:30pm. Refreshments. Call 822-4256.

### Mathematics Colloquium

TBA. Prof. Nassif Ghoussoub, Math 100 at 3:30pm. Refreshments Math Annex 1115 at 3:15pm. Call 822-2666.

### Geography Colloquium

Racial Residential Segregation In The Largest Metropolitan Areas In The United States. Joe Darden, Michigan State U/U of Toronto. Geography 229 from 3:30-5pm. Call 822-2663.

### Physical Chemistry Seminar

Quantum Computing And NMR. Shangwu Ding, Chemistry D-225 (centre block) at 4pm. Call 822-3266.

### G. Peter Kaye Lectures

A Christian Address To Our Dangerously Religious World: A Christian Address On Civil Commitment. Martin E. Marty, U of Chicago. Vancouver School Of Theology Epiphany Chapel at 7:30pm. Call 822-9815.

### Ensemble Showcase Concert

UBC Chamber Strings, Collegium Musicum. Chan Centre at 8pm. Call 822-5574.

### Saturday, Mar. 7

#### Vancouver Institute Lecture

War In The 20th Century: Can We Do Better In The 21st? Prof. Kal Holsti, Political Science. IRC #2 at 8:15pm. Call 822-3131.

## Notices

### First Nations Career Fair

The First Nations House Of Learning is hosting a Career Fair on March 19. It is a mini-conference for First Nations high school students interested in attending UBC. UBC faculty, staff, or students who wish to provide information about their department, program or service can contact Verena Cootes-Wilhelmson, First Nations Student Services Coordinator. E-mail wilhelms@unixg.ubc.ca or call 822-8941.

### Moved Back Home?

Research is being conducted to find out what returning home in adulthood is like. Men and women (mid 20-40s) who have returned home to live with their parents and currently have been living with them for at least six months are needed. A confidential interview at UBC is involved. Also three chances to win \$100. Call Michele Paselukho, UBC Counselling Psychology Dept. 822-5259 or 269-9986.

### UBC Birding

Join a one-hour birding walk around UBC campus every Thursday at 12:30pm. Meet at the Rose Garden flagpole. Bring binoculars if you have them. For details call Jeremy Gordon 822-8966.

### Next calendar deadline:

noon, Feb. 24

## Forum

# After land mines, a new challenge for Canadian compassion

by David Fraser

David Fraser is a professor of Animal Welfare in the Dept. of Animal Science and the Centre for Applied Ethics. He holds the Natural Sciences and Engineering Research Council Industrial Research Chair in Animal Welfare at UBC.

As Canadians, we can be proud of Canada's leadership in trying to reduce suffering through the international ban on land mines. For our next assignment, let us be at the forefront of a movement to end another form of suffering that countries around the world seem powerless to combat.

The chimpanzee is our closest biological relative, but only recently has science shown how close the relationship really is. New genetic techniques show that chimpanzees share 98.4 per cent of our DNA. This makes the chimpanzee and the human as closely related as, for example, the zebra and the horse, or the fox and the dog.

Studies of behaviour also reveal remarkable parallels between the two species. Like us, chimpanzees have a

childhood lasting many years, and they form permanent attachments to their mothers. They empathize with others who are injured; they teach their young through demonstration; they plan and carry out ingenious deceptions; they have a rich system of gestural communication which makes them natural at learning our systems of sign language. As primatologist Roger Fouts puts it, the chimpanzee is a "highly intelligent, co-operative, and violent primate who nurtures family bonds, adopts orphans, mourns the death of mothers, practises self-medication, struggles for power, and wages war." Sound familiar?

In terms of intellect, there is an obvious gulf between humans and chimpanzees. However, this mainly appears to involve the special human capability to use spoken and written language to string together long sequences of thoughts. This capacity allows us to express abstract ideas and to invent complex technologies. But apart from this difference, humans and chimpanzees are now thought to be very similar in their cognitive processes. In a recent review of

scientific evidence of cognition and self-awareness in animals, two American psychologists concluded that humans and the great apes (chimpanzees, gorillas and orangutans) stand apart from all other species that have been studied, whereas the difference between ourselves and the great apes is largely quantitative.

The obvious conclusion from this evidence is that chimpanzees are capable of suffering very much as humans would suffer when they are captured, imprisoned, or when family members are taken from them. Scientists who study the welfare of animals disagree on many issues, but no one today seriously argues that chimpanzee suffering and human suffering are substantially different.

What are the implications of our new understanding of chimpanzees? First, we need to focus international pressure and assistance on the destruction of chimpanzees killed for meat, body parts, or to capture their infants for sale. We should treat these deaths with the seriousness we attach to murder and genocide rather than poaching. Next, in any cases where it is proposed to



Fraser

use chimpanzees in research or entertainment, we should apply the same degree of scruples as we would if these actions were done to human beings.

But to begin the process, we need to take a small but original step: we need to revise our legal system so that chimpanzees, and probably other great apes, are accorded appropriate status under the law. The legal system recognizes living beings as either persons or property. Chimpanzees need a category of their own to recognize their funda-

mental similarity to humans, while still acknowledging that they stand outside human cultural institutions.

To bring the law into line with our scientific understanding of chimpanzees will require careful thought, legal innovation, and political will. But by resolving the issue in Canada, where chimpanzees are few in number and where vested interests are unlikely to derail the process, we could develop a legal formula that would serve as a model for the rest of the world.

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9:00 am - 6:00 pm  
 Friday, February 27 &  
 Saturday, February 28, 1998  
 Green College  
 6201 Cecil Green Park Road  
 The University of British Columbia

#### SYMPOSIUM PROGRAM

Papers, Panels, Performances, and Public Debate examining the conceptualization and practice of interdisciplinarity by graduate students

Registration Fee: \$10

The symposium is open to everyone. Coffee and Lunch will be served.

#### FRIDAY FEBRUARY 27

- 8:30 • Registration  
 9:00-11:00 • Methods & Practices I  
 11:30-1:00 • Science, Technology, Society I  
 1:00 Lunch Buffet

2:00-3:30 **Keynote Address JULIE THOMPSON KLEIN** This noted educator, interdisciplinary scholar and author of *Crossing Boundaries: Knowledge, Disciplinarity, and Interdisciplinarity* (1996) will give a talk entitled:

**IMAGES OF THE KALEIDOSCOPE:  
 STORIES AND METAPHORS OF INTERDISCIPLINARY RESEARCH**  
 Discussion to Follow

5:30 **Reception and Poetry Readings**

#### SATURDAY FEBRUARY 28

- 8:30 Registration  
 9:00-11:00 • Cultures, Identities, Ideologies I  
 11:30-1:00 • Science, Technology, Society II  
 1:00 Lunch Buffet  
 2:00-3:30 • Health Issues II  
 3:30-4:30 Coffee and Informal Discussions

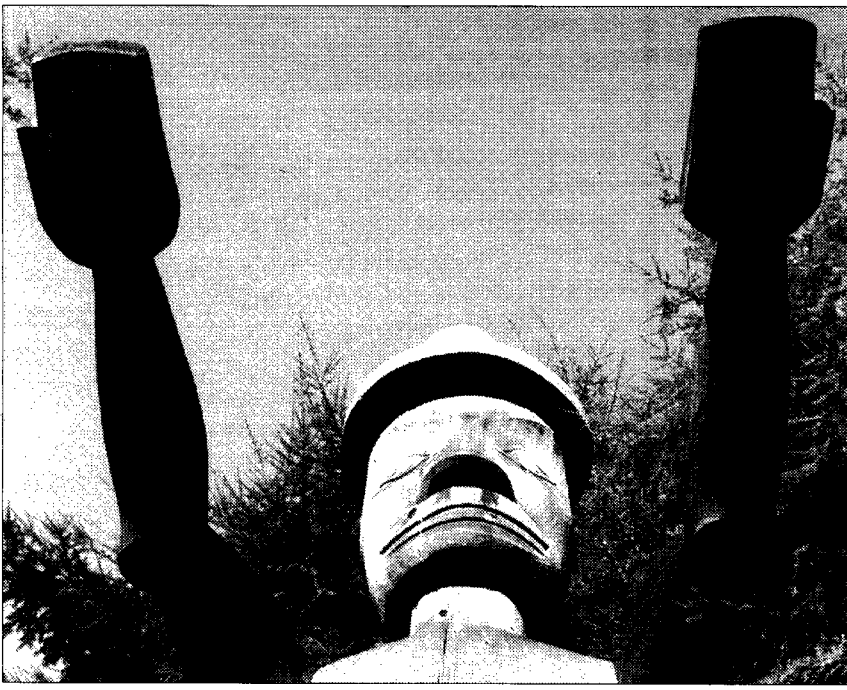
• Methods & Practices III  
 • Cultures, Identities, Ideologies II

All sessions take place at Cecil Green College. Rooms will be noted in the final program and at entrances.

For more information contact:

IISGP Office, Green College, 6201 Cecil Green Park Road, UBC, Vancouver BC V6T 1Z1  
 Tel: 604/822-0954 Fax: 604/822-8742 E-mail: iisgp@mercury.ubc.ca Website: www.interchange.ubc.ca/iisgp





Gavin Wilson photo

## Hands Of Hello

Welcoming visitors to the Museum of Anthropology, this red cedar totem was carved in 1984 by Joe David of the Tla-o-qui-aht First Nation and raised in front of the museum in 1992. Welcome figures were traditionally placed on the beaches of Northwest coastal villages.

# Safeway staff help clinic buy needed equipment

Employees from a local Canada Safeway store have made a contribution to movement disorders research at UBC.

A group of five employees from the Tenth Avenue and Sasamat branch wanted to do some fundraising that would be relevant to the Point Grey community served by the store.

Luckily for patients at the UBC Movement Disorders Clinic, the group decided to make equipment for the newly renovated clinical trials area of the facility the target of their campaign.

A summer of hot dog sales, car washes and barbecues in the Safeway parking lot brought in a total of \$4,000 from Safeway employees and customers.

The store also distributed information brochures about movement disorders, the most common of which, Parkinson's disease, affects 80,000 Canadians.

"We've never tried anything like this before," says Safeway administrative clerk Valerie Wong, coordinator of the campaign. "All the employees really got behind it."

With the donation the clinic was able to purchase an adjustable height patient bed and weighing scales which will enable clinic staff to carry out examinations for clinical trials in one location.

"It makes a real difference for patients with movement difficulties to have activities centralized," says Prof. Donald Calne, director

of UBC's Neurodegenerative Disorders Centre, of which the Movement Disorders Clinic is a part. With funding support for clinical research projects becoming more difficult, donations such as this are especially appreciated, he adds.

The adjustable height bed is particularly helpful for patients who use a wheelchair, says clinical trials nurse Sharon Yardley. Patients can now simply slide from the chair across to the bed, which is then raised pneumatically to a comfortable working level.

The new equipment is currently being used in two clinical trials of Parkinson's disease medication.

## NEW FACULTY POSITION IN WOOD ADHESIVES AND COMPOSITES

### Department of Wood Science The University of British Columbia

The Faculty of Forestry has established a new undergraduate Wood Products Processing degree program to prepare graduates for careers in Canada's primary and secondary wood products industries. The Faculty maintains a wood products laboratory to support education programs and advanced research in various fields of wood products and advanced wood processing relevant to the needs of Canada's primary and secondary wood industry.

A new tenure-track Faculty appointment is available in the field of Advanced Wood Adhesives and Wood Composites. The candidate will be responsible for delivering undergraduate courses including: Wood Adhesives and Coatings, Glued Wood Products and a graduate course in Wood Composites. The candidate must develop a basic and applied research and extension program to address the issues important to the primary and secondary wood products manufacturing industry.

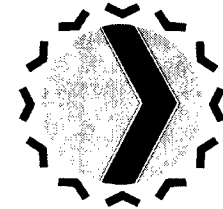
The successful applicant will have an outstanding background in polymer or wood chemistry and the experience to undertake leading edge fundamental physical-chemical research on wood - adhesive interactions at the micro and macro scale. A Ph.D. is required. Experience in wood products research is an asset. The research program should involve the development of fundamental knowledge of wood-adhesive bonding mechanisms in both wood and fibre composite materials and application of that knowledge to improve wood and fibre composite manufacturing operations and the performance of wood and fibre composites under in-service environment conditions.

Salary will be commensurate with qualifications. UBC hires on the basis of merit and is committed to employment equity. We encourage all qualified applicants to apply. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. Program information is available on our web sites: [www.wood.ubc.ca](http://www.wood.ubc.ca) and [www.cawp.ubc.ca](http://www.cawp.ubc.ca). Applications must include a Curriculum Vitae and the names of at least three references. The closing date for the competition is **May 15, 1998** or until the position is filled. Mail or fax applications to:



**Dr. J. David Barrett**  
Head, Department of Wood Science  
University of British Columbia  
385 - 2357 Main Mall  
Vancouver, BC  
V6T 1Z4  
Fax: (604) 822-9104

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## CCPE National Scholarships

### 1998 Call for Entries

The Canadian Council of Professional Engineers announces a Call for Entries for 1998 CCPE National Scholarships. Six cash prizes totalling \$50,000 will reward excellence in the Canadian engineering profession and support advanced studies and research.

To be eligible, candidates must be registered as full members with one of Canada's provincial or territorial professional engineering associations/ordres.

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- Two CCPE—MELOCHE MONNEX Scholarships of \$7,500 each support engineers returning to university for further study or research **in a field other than engineering. Candidates must be accepted or registered in a Faculty other than Engineering.** The field of study should favour the acquisition of knowledge which enhances performance in the engineering profession.
- A CCPE—ENCON Endowment of \$5,000 will be awarded to a professional engineer pursuing studies in the area of engineering failure investigation, risk management, and/or materials testing. This area of engineering is concerned with analyzing the causes of materials failure and preventing accidents in the industrial, manufacturing, or construction sectors.

**Deadline for applications in all categories is May 1<sup>st</sup>, 1998.**

Scholarship application forms are available from your provincial or territorial professional engineering association/ordre or from:

CCPE National Scholarship Program  
Canadian Council of Professional Engineers  
401 - 116 Albert Street  
Ottawa, Ontario, K1P 5G3.  
Tel - (613) 232-2474, Ext. 227  
Fax - (613) 230-5759  
E-mail - [chantal.lalonde@ccpe.ca](mailto:chantal.lalonde@ccpe.ca)  
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## News Digest

A special service will be held in celebration of the life of Prof. J. Keith Brimacombe at 2 p.m. on Friday, Feb. 27, at St. Mark's College Chapel, 5935 Iona Dr. (at the corner of Wesbrook Mall and Chancellor Blvd.).

Brimacombe was serving as president and chief executive officer of the Canada Foundation for Innovation (CFI) when he died suddenly Dec. 16. He was 54.

A professor of Metals and Materials Engineering, Brimacombe was the former director of the Centre for Metallurgical Process Engineering. He joined UBC in 1970.

The Dr. J. Keith Brimacombe Scholarship Fund has been established in his memory. Donations can be made to the fund care of the Toronto Dominion Bank, 2105 W. 41st Ave., Vancouver, B.C. V6M 1Z7.

•••••

UBC's School of Nursing is hosting the fourth international, multidisciplinary Qualitative Health Research Conference Feb. 19-21.

Conference organizers aim to provide a forum for the discussion and dissemination of qualitative health research methods among new and emerging leaders in the field in order to enhance current understandings of health, health care and health-related research. Keynote speakers from Canada, the U.S. and Australia will touch on topics ranging from feminist research to women and HIV.

Information on the conference can be found on the Internet at <http://www.nursing.ubc.ca/docs/netevents.html>.


•••••

A new lab designed specifically for occupational therapy research has opened in the School of Rehabilitation Sciences.

The Margaret Hood Occupational Therapy Research Lab, named for the first head of the Division of Occupational Therapy, is the first designated research space available since the division was established in 1961.

The facility will be shared by occupational therapy researchers. Health-care needs of immigrants and refugees, adaptation at home following stroke, and arthritis management, including pain medication choice, are some of the issues being studied at the lab.

The lab was created by re-allocating space within the School of Rehabilitation Sciences. Renovations were made possible through funding from the Arthritis Society (B.C./Yukon Division).



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The classified advertising rate is \$16.50 for 35 words or less. Each additional word is 50 cents. Rate includes GST. Ads must be submitted in writing 10 days before publication date to the UBC Public Affairs Office, 310 - 6251 Cecil Green Park Road, Vancouver B.C., V6T 1Z1, accompanied by payment in cash, cheque (made out to UBC Reports) or internal requisition. Advertising enquiries: 822-3131.

The deadline for the March 5 issue of UBC Reports is noon, February 24.

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**Next ad deadline:**  
noon, Feb. 24

THE UNIVERSITY OF BRITISH COLUMBIA

## President's Service Award for Excellence

### Call for nominations

All university employees and students are invited to nominate individuals for the President's Service Award for Excellence.

The award recognizes excellence in personal achievements and outstanding contributions to the University of British Columbia.

All university employees, including staff, faculty, senior academic and administrative personnel are eligible.

**Deadline for nominations: Feb. 28, 1998**

For a nomination form, call 822-2484.

Please note names will not be considered by the committee without a completed nomination form.

# Silverman embarks on Beethoven sonata cycle

by Gavin Wilson

Staff writer

Robert Silverman is a musician with a mission.

The acclaimed pianist and School of Music professor plans a rare feat. He is playing all 32 of Beethoven's piano sonatas in eight recitals spread over 12 months at the Chan Centre for the Performing Arts.

It marks the first time the complete sonatas have been played in Vancouver by one person in more than 35 years.

Silverman has spent years planning and preparing his performance of these complex works he calls "one of the great oeuvres in Western art."

"As a pianist and as a teacher, nothing else that I have done comes close to the experience that I have had while studying and performing these masterworks," says Silverman.

One of Canada's most distinguished pianists, Silverman gave his first recital at age five and



Silverman

made his debut with the Montreal Symphony at 14. He has performed with symphonies on four continents — from Sydney to St. Petersburg — and with every major orchestra in Canada. The Chan Centre perform-

ances are one of several sonata cycles Silverman will play this year. He is in the midst of similar cycles in Kitchener-Waterloo, Courtenay/Campbell River and Madeira Park on the Sunshine Coast.

This summer he begins another at the Glenn Gould Studio in Toronto. Other performances are being negotiated.

Silverman began the Chan Centre performances of the cycle Jan. 11. More concerts in the series are scheduled for Feb. 15, April 26 and May 10 before a summer hiatus. The series resumes in September and continues with a performance each month until December.

Silverman is not playing the sonatas in chronological order. Instead, each concert program will highlight various aspects of Beethoven's evolution as a composer.

Tickets for Silverman's performances are available through Ticketmaster or at the Chan Centre box office.

## UBC leads way once more in charity giving

UBC is once again among the top Lower Mainland organizations in the United Way category of Leaders of the Way with 60 donors who contributed \$1,000 or more.

Although at \$292,511 total campaign contributions fell just shy of the goal of \$310,000, 1997 Campaign Chair Peter Nault praised UBC's United Way volunteers.

"This group of people should

be proud to have achieved so much so quickly."

UBC also was among the top organizations in the Discoverer category—those with donors who contribute \$500 or more.

Asian Studies Prof. Emeritus John Howes was the winner of the campaign's grand prize — a trip for two to any Canadian Airlines destination.

BCFT presents  
**Ground Beef Irradiation Petition**  
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Location: Chan Center UBC  
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 The Barn is open 7:30am - 3:30 pm )*

Please check for postings at your favourite locations or turn to the *Calendar Section* for more detail.



**UBC FOOD SERVICES**

Visit our Web Site @ [www.foodserv.ubc.ca](http://www.foodserv.ubc.ca)

## People

by staff writers

**Jean Barman**, a professor in the Dept. of Educational Studies, has been re-appointed to the B.C. Heritage Trust, a government agency that promotes and supports community-based heritage conservation.



Barman

Barman will now serve as chair of the trust. Culture Minister Jan Pullinger said in a recent announcement.

The trust was established in 1978 to support conservation, increase public awareness, understanding and appreciation of heritage, and provide financial assistance to community heritage projects.

Barman is author of *The West Beyond the West*, a social history of British Columbia.

• • • •

**Bruce Macdonald**, director of UBC's Botanical Garden, has been awarded the 1998 Gold Veitch Memorial Medal by the Royal Horticultural Society of the United Kingdom for "outstanding contribution to advancement and improvement of the science and practice of horticulture."

This is the first time the society's most prestigious international award has been given to a Canadian.

Macdonald is acknowledged for his work in the development of the UBC Botanical Garden and the innovative and internationally acclaimed Plant Introduction Scheme, as well as for his work with the B.C., Canadian and U.K. nursery industry and with the International Plant Propagators' Society and Canadian Ornamental Plant Foundation. His book, *Practice of Woody Plant Propagation for Nursery Growers*, is a standard text for universities, colleges and nursery growers.

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**Prof. Linda Peterat** of the Dept. of Curriculum Studies has won the Federation Award from the Canadian Home Economics Association for her outstanding service to the education profession in B.C.



Peterat

Peterat was also presented with the Outstanding Professional Award from the B.C. Home Economics Association in recognition of her professional leadership and research in curriculum history and philosophies in Canada.

She was also recognized by the Teachers of Home Economics Specialist Association of the B.C. Teachers' Federation for professional and scholarly contributions to the teaching profession.

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**Richard Kerekes**, director of the UBC Pulp and Paper Centre, recently received the 1997 Beloit Award and a \$5,000 honorarium from the Engineering Division of the Technical Association of the Pulp and Paper Industry (TAPPI).

The award, made at the TAPPI conference in Nashville, Tennessee, recognizes significant contributions to the engineering science of fibre processing and paper making.

A TAPPI member since 1976, Kerekes is also a fellow of the Canadian Academy of Engineers and the Chemical Institute of Canada.

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**Oral Biology Prof. Don Brunette's** book, *Critical Thinking: Understanding and Evaluating Dental Research*, has been awarded a first place in the American Medical Writers Association (AMWA) 1997 Medical Book Awards Competition.

This is the first book for Brunette, who is associate dean in the Faculty of Dentistry. The text offers a systematic approach for analysing dental research and is intended to assist students and practitioners.

The competition focuses on North American health sciences writers and winners are chosen by a committee of the AMWA.

A second edition of the book, which was published in 1996, is planned.



## Profile

# Schooling with dolphins

Kathy Heise searches for what's bringing the dolphins back

by Stephen Forgacs

Staff writer

Last summer, Kathy Heise came a little too close to becoming part of a food chain she wouldn't normally associate herself with.

Heise, a Zoology doctoral student, was studying seabirds from a blind set up on a small rocky island about 10 kilometres from shore near Hudson Bay when a couple of polar bears waded ashore.

The bears, although primarily interested in dining on the ground-nesting birds and their eggs, stalked Heise and her two colleagues for two days, hardly deterred even by shotgun blasts. After using a radio-telephone to call for help, Heise assembled a small Zodiac and returned to the mainland to pick up two Inuit and an RCMP officer who had travelled eight hours in a four-wheel drive vehicle to meet her. Back on the island they too were unsuccessful in persuading the bears to leave.

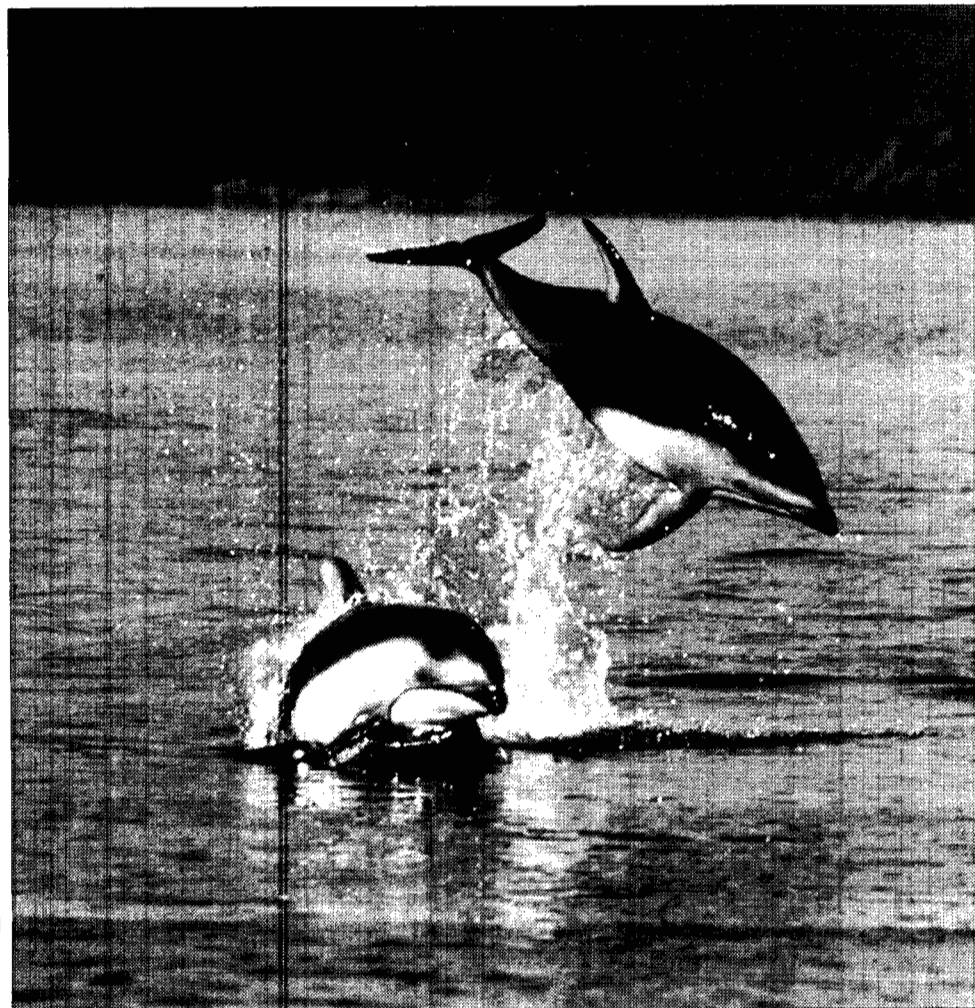
"After six days of bear occupation we finally loaded our gear into the Zodiac and left. And, at the rate the bears were going through eggs, we could tell that very soon there wouldn't be any nests left to study.

"I learned a few valuable lessons about how to behave when confronted by polar bears through that experience," Heise says, from the relative safety of her office in a UBC hut.

While last summer's experience may have given Heise a new interest in polar bears, or in avoiding them, her real research interest remains a much friendlier creature — the Pacific white-sided dolphin.

Thousands of British Columbians and visitors have had at least a brief encounter with Pacific white-sided dolphins, thanks to the presence of White Wings in the killer whale pool at the Vancouver Aquarium. Now even more are becoming acquainted with the species thanks to its reappearance in the past decade along the B.C. coastline, particularly north of Campbell River on Vancouver Island and up the central coast. Since 1992, the dolphins have also been regularly sighted in the inshore waters of southeastern Alaska, and sightings in the inshore waters of Georgia Strait are becoming more common.

Heise's interest in the dolphins was sparked in 1986. While working as a lighthouse keeper, she detected the



Kathy Heise photo

**After decades of staying away from B.C. waters, Pacific white-sided dolphins have returned. Schools numbering several hundred have been spotted moving through Johnstone Strait.**

dolphins' distinctive vocalizations on a hydrophone set up to monitor killer whale activity, and saw a school of several hundred dolphins moving through Johnstone Strait.

"Hearing the dolphins came as a surprise after five years of seeing and hearing only killer whales," Heise says.

The question of why the dolphins — usually considered inhabitants of offshore waters — have appeared along the coast led Heise to UBC and became the subject of her master's thesis.

The recovery of dolphin teeth from aboriginal midden sites near Queen Charlotte Strait and on several Gulf Islands suggests dolphins have travelled the coast for at least 2,000 years. Sightings in B.C. waters though have been relatively rare since the first was officially recorded in 1900.

A survey conducted by Heise of hundreds of mariners revealed that while a number of people recalled seeing dolphins along the B.C. coast in the 1940s, '50s and '60s, sightings of the Pacific white-sided dolphin dropped off dramatically between the late 1970s and mid-1980s.

Now the acrobatic dolphins, which can live to be as old as 46 years, are seen frequently along the coast, travelling in schools as small as two and as large as 1,000. The fact that white-sides are attracted to boats — they often bow ride, surfing the water swell in front of a boat — contributes to making an accurate population count difficult, says Heise. The same group could easily be counted again and again. With no firm results, estimates of the Pacific white-sided dolphin population in the North Pacific

run from 50,000 to 4.5 million.

In seeking to find reasons for the white-side's reappearance, Heise set out to record the life history parameters of the dolphin — such as lifespan, breeding cycles, and size — while also examining its diet and collecting information on its range.

Heise considered three possible explanations for the dolphin's reappearance in the mid- to late 1980s. An obvious explanation could simply be that population growth accounted for the dolphin sightings off B.C. However, after evaluating factors including lifespan, age at sexual maturity and annual pregnancy rate, Heise determined that the population appears stationary, and that population growth was therefore an unlikely explanation for the dolphins' sudden appearance.

She also considered the impact of the high seas fishery, notably the Japanese flying squid driftnet fishery which is estimated to have caused the death of 49,000 to 89,000 white-sided dolphins between 1978 and 1990 before being closed in 1992.

Since the dolphins' reappearance on the B.C. coast occurred while the fishery was taking a toll on dolphin populations, a possible explanation was that the white-sides, faced with driftnets in the open ocean, had sought the relative safety of coastal waters. However, since thousands of dolphins remain along B.C.'s coast more than five years after the squid fishery ended, it too seemed an unlikely reason for their appearance.

Finally, Heise turned to a "regime shift" explanation which considers

factors such as climate and water temperature changes and related changes in various fish stocks, such as salmon, herring and anchovy.

Heise points to evidence that certain fish populations, such as sardine and anchovy — both of which are prey of Pacific white-sided dolphins off California — appear to fluctuate at intervals of 60 to 100 years. Sardines, abundant off the B.C. coast until the mid-1940s, are making a comeback in California and since 1996 have reappeared in B.C. waters.

Fluctuations of marine species such as zooplankton, sea birds, herring, salmon and other forage fish species also suggest a link to a regime shift in the North Pacific that began in 1976-77, says Heise. An earlier regime shift from warm to cool temperatures took place during the winter of 1946-47.

Examining the stomach contents of dolphin carcasses combined with hours observing them feed and then identifying the remnants, has helped Heise determine the species' sources of food. Pacific white-sided dolphins from B.C. to Japan have a diet ranging from salmon, squid, herring and anchovy to the odd jellyfish. The dolphins Heise studied off B.C. seemed to show a preference for salmon and herring.

But Heise stops short of a definite link between past and recent changes in climate, the effect those changes have on fish stocks, and the reappearance of the dolphins.

"Unfortunately we don't have enough historical evidence of dolphin abundance to link the earlier regime shift with changes in dolphin distribution," she says.

While Heise acknowledges the many unanswered questions remaining about the Pacific white-sided dolphins' reappearance, her compilation of information and research into the dolphins' diet represents a step toward understanding the animal and its behaviour.

Heise remains deeply interested in the dolphins, but has broadened the scope of research for her PhD to look at food-chain-related interactions between forage fish, marine mammals and seabirds.

And, in the months of research that lie ahead, Heise hopes to build on her knowledge of the marine mammal food chain, without becoming part of it.